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Journal of the Society of Arts.

FRIDAY, FEBRUARY 7, 1868.

Announcements by the Council.

ARTISANS' REPORTS ON THE PARIS EXHIBITION.

The Reports of the Artisans selected by the Council to visit the Paris Exhibition are now ready, and may be had of the Society's publishers, Messrs. Bell and Daldy, York-street, Covent-garden. One volume; demy 8vo., 732 pages, price 2s. 6d. in boards, or 3s. 6d. in cloth. The volume contains reports, by upwards of eighty artisans, upon the principal industries represented in the Exhibition, as well as special reports on the condition and habits of the French working classes.

ORDINARY MEETINGS.

Wednesday evenings, at Eight o'clock:—

FEBRUARY 12.—"Report on the Art-Workmanship Competition, 1868."

FEBRUARY 19.—"On the Supply of Animal Food to Britain, and the Means Proposed for Increasing it." By WENTWORTH LASCELLES SCOTT, Esq., F.C.S.

FEBRUARY 26.—"On a Daily Mail Route to India." By HYDE CLARKE, Esq., D.C.L.

CANTOR LECTURES.

A course of lectures "On Food," is now being delivered by Dr. Letheby, M.A., Professor of Chemistry in the College of the London Hospital, and Medical Officer of Health, and Food Analyst for the City of London, as follows:—

MONDAY, FEBRUARY 10.—LECTURE IV.

Adulterations of Food.—Conclusion.

The lectures commence each evening at Eight o'clock, and are open to members, each of whom has the privilege of introducing two friends to each lecture.

INSTITUTIONS.

The following Institution has been received into Union since the last announcement:—

Chatham—St. Mary's National School Science Classes.

SUBSCRIPTIONS.

The Christmas subscriptions are due, and should be forwarded by cheque or Post-office order, crossed "Coutts and Co.," and made payable to Mr. Samuel Thomas Davenport, Financial Officer.

Proceedings of the Society.

FOOD COMMITTEE.

The Committee met on Saturday, January 18th. Present—Mr. W. H. Michael (in the chair), Sir Robert Montgomery, Mr. E. C. Tufnell, Mr. J. T. Ware, and Mr. Ludford White.

Mr. WILLIAM CHARLES JOSEPH WEST attended the Committee for the purpose of giving information with regard to the improvement of metropolitan markets.

Mr. WEST, in reply to the interrogations of the Committee, stated he was an architect, and partly from the interest he took in them, and partly in connection with his profession, he had made many observations with regard to the London public markets, and also several provincial markets. From what he had observed he thought markets generally had established themselves in a very casual manner at first, till necessity had shown such things to be desirable in a better form; and he had observed that the most successful markets—speaking of the metropolis, for there was a great distinction in this respect between London and the provinces—were those which had been established in the poorest and most crowded parts of the town. It was astonishing how so large an amount of business was done in such confined and crowded localities. New markets in new localities did not succeed so well. He, therefore, thought the best course to be adopted, with a view to success, was to increase the facilities of the existing markets; that was, to open them out more and give more room for the business, more especially, if possible, either to have them by the side of a leading thoroughfare, or to convert the locality where they are situated into a leading thoroughfare. There was the instance of Farringdon Market being removed from where it was formerly held, in the main thoroughfare, to a situation where it was almost shut out from observation. The market was not frequented by the same class of persons as before its removal, and it was very far from being a success. Not having investigated the Farringdon Market question, he could not say how far the levying of tolls by the City, or the rents charged for the use of the building, might have militated against the success of the new market.

The CHAIRMAN asked Mr. West if the committee were to understand him as being favourable to the continuation of the existing street-markets in leading thoroughfares?

Mr. WEST replied—Not exactly in thoroughfares, but by the side of them, and quite open to the view of the public, so that persons passing and repassing would see them, and be aware of their existence. The market should be open to the thoroughfare, at least, on one side of it. If the markets were properly arranged in this respect he thought it would tend to do away with what might be regarded as markets by sufferance. They were not actually markets, but answered as such by the congregation of people with stands and stalls. He thought they might, under proper arrangement, be accommodated in the markets in a different way to what they were at present. Mr. West would, if possible, have the market on one side of the thoroughfare, with avenues leading from the thoroughfare through it, either as centres or at either end; and if a secondary thoroughfare were obtained at the other side it would be all that is required. Mr. West added, he was acquainted with Whitecross-street market (so-called). There was a large market in the street itself on Saturday nights. In that case, if the retention of the market was considered desirable, the thoroughfare might be considerably widened for the purpose, by taking in some of the side streets. It might not be so important in the case of Whitecross-street, because it was not a

leading thoroughfare for traffic. Any experiment in that market would involve certain streets being taken for the formation of a regular market. Taking in the small side streets would increase the width of the thoroughfare, and give room for the market. He had not entered into a calculation of the expense attending the carrying out of such a plan as that, but that was a thing contingent upon all improvements, more or less. In some instances the expense would be borne by the locality in which the improvements were made; in others, the shopkeepers might contribute to that which would probably improve their own business. Mr. West believed that, as a rule, shopkeepers were favourable to it. The large number of people brought together in a market contributed to the increase of their trade. Such a plan as he proposed would, he apprehended, remove the present class of costermongers and itinerant vendors from the street market, and give them the convenience of a market proper. That would of course involve a small payment for standings or shops. The great bulk of those who constitute the successful markets were itinerant vendors of articles who pay neither tolls, nor rents, or any other charge. He had been led to think more on the subject by the operation of the recent Act for the regulation of the streets, &c. Previous to that Act being passed there was a considerable costermonger market at Strutton-ground, Westminster. The people were driven away from there without any other provision being made for them; and it was to be presumed that they dispersed themselves to other localities. Whitechapel was another locality which suffered considerably in this respect, by the operation of the Act. The costermongers and people carrying on miscellaneous trades in the street were driven away, and were at a loss how to get a living. They were a class of people of whom many were perhaps but one remove from the "roughs." He thought a great many would be willing to pay a small toll or rent for proper accommodation in a regular market, where conveniences were provided for them, and by that means they might become respectable tradesmen.

The CHAIRMAN remarked that Mr. West's observations on that point were at variance with those which had been previously laid before the Committee. It was the opinion of some people, he said, that it was hopeless to expect to improve the social status of the present race of costermongers.

Mr. West observed that he had seen instances in which persons had risen from costermongers to be tradesmen in large businesses. If their lives were traced it would be found they began as girls and boys—for the former were quite as numerous as the latter in the costermonger class—with baskets or other small stocks of what they sold. From that they some of them got to barrows, with an increased stock of articles; others formed small connections of their own and set up a horse and cart, from which they vended their goods in neighbourhoods which they daily traversed; others got to occupy small shops, and added to their business that of dealing in coals and coke, and the removal of furniture with the carts or vans they possessed. There were several instances of this kind which had come under his own observation, but he could not say whether they were numerous.

The CHAIRMAN called Mr. West's attention to the fact that in those streets in which markets were held there were tradespeople's shops on both sides. If he understood the proposition, it was to widen the thoroughfare so as to give more room for the market, by taking in the side streets on both sides, by which means the existing shops would be cleared from any obstruction complained of.

Mr. West replied that would be preliminary to providing better accommodation subsequently; so with regard to the itinerant dealers, they would not object to pay a small rent for a stall or pent-house. He considered it very desirable to accommodate the costermonger class, who were really an industrious class, in

these markets, because there were many people who would not go to a shop for such goods as they were accustomed to obtain from the stalls and barrows; and he thought it desirable to give all possible encouragement to a class which was highly beneficial to the poorer portions of the community in the cheapening of the articles they mostly consumed. Supposing any form of market were adopted, he suggested that the centre part should form the better portion of the market, and the itinerant class of dealers could be accommodated at the outer portion.

The CHAIRMAN suggested that Mr. West would be good enough to follow out his first idea of markets in leading thoroughfares, and widening the side streets as avenues to them. To take the case of Farringdon-market, the committee would be glad to hear Mr. West's ideas as to how it might be rendered more available to the general public.

Mr. West said he had not seen the market in operation lately, but last time he was there the centre portion was almost unused, except for standing goods. He explained how he proposed to widen out the approach to Farringdon-market, so as to bring it more into public view from the leading thoroughfare. The same remarks, he thought, did not apply to Oxford-market, which was a steady, quiet affair, principally supported by the inhabitants of the neighbourhood.

The CHAIRMAN said, so far as he understood Mr. West, Oxford-market exactly carried out his ideas, as it opened directly into the main thoroughfare; and on that principle they might expect that market to be one of the most successful in London.

Mr. West replied, in that case there was room for the market without obstructing the thoroughfare, but in Great Titchfield-street, a short distance northward, there were stands of barrows every day, on Saturday nights especially. Mr. West attributed it to custom, which it was difficult to break through. People often went long distances to a street-market. He was not able to state how Oxford-market was managed with regard to rents of shops and stalls. He understood that market had been purchased by a private individual. In the case of any new market being established he should expect the occupants of stalls to pay rent for them, to meet the interest upon the capital expended. The principal objection to the existing street-markets was, the obstruction of the thoroughfares in which they were held. As he had already stated, these sufferance-markets were rather encouraged by the tradespeople in some localities, on account of the large number of people they were the means of congregating together, which added very largely to their own trades; so that the inconvenience in one way was compensated by an advantage in another. It was very seldom, he believed, that the regular tradespeople complained of a market being held in the streets in which they resided, although the noise and confusion were necessarily very great. As he had already remarked, the circumstances of London markets and provincial markets were very distinct from each other. The latter were held only on certain days of the week, and on those days the inhabitants laid in their stock of provisions till the next market-day—the market-day being the only day of the tradesmen in the town—the country people attending the market purchasing from the tradesmen of the town what they required till next market-day. Mr. West instanced the New-cut and Lambeth-walk markets as being largely attended by the lower classes, especially on Saturday nights, and he never heard of any objection being made against them by the tradespeople occupying the shops. To a certain extent a market was always going on there, which was attended by different classes of people at different periods of the day. In the forenoon it was attended by the wives of the better classes of artisans, and in the evening by the poorer classes. He readily bore testimony to the great value and importance of the costermongers as a

class, as also to their industry. If the costermonger system were abolished, the poor would unquestionably be deprived of many things which they now got. Due provision ought, therefore, to be made for the accommodation of that class in any new markets that were established or in the improvement of those existing, and, by way of encouragement, they might be allowed to have their stalls and barrows free of any charge for standing, until they had the means and opportunity of bringing back to themselves the trade they had lost in the localities they had been accustomed to frequent. It was his opinion that space might be found in the markets for the costermongers. He had no further knowledge of the habits of that class, and of their mode of doing business, than he had gathered from casual observation and reading. On the subject of the late Hungerford Market, Mr. West expressed an opinion that, if the plan had been carried out with the view of establishing it as a retail market only, it would have been successful, and his own impression was that success was beginning to set in just about the time when it was swept away for the purposes of the railway.

NINTH ORDINARY MEETING.

Wednesday, February 5th, 1868; SAMPSON S. LLOYD, Esq., Chairman of the Associated Chambers of Commerce, in the chair.

The following candidates were proposed for election as members of the Society:—

Baker, William Procter, Clifton, Bristol.
Byatt, Horace, St. Mary's School, Chatham.
Chapman, Henry, 41, Boulevard Malesherbes, Paris.
Harrington, Sir John, Bart., 58, Eaton-place, S.W.
Pembroke, James, The Academy, East-street, Hereford.
Scott, W. B., C.E., St. Pancras Vestry, Edward-street, Hampstead-road, N.W.
Westerton, Charles, 27, St. George's-place, Hyde-park-corner, S.W.

The following candidate was balloted for, and duly elected a member of the Society:—

Hogarth, Alexander P., Aberdeen.

The Paper read was—

ON THE EXTENSION OF COMMERCE BETWEEN THE UNITED KINGDOM AND INDIA, AND ON THE DEVELOPMENT OF THE RESOURCES OF BOTH COUNTRIES BY MEANS OF TRADE MUSEUMS.

By J. FORBES WATSON, M.D.,

Reporter on the Products of India to the Secretary of State for India in Council.

On the present occasion I propose to bring under your notice the question of the extension of the commercial relations between this country and India, by means of collections of manufactures and products, so arranged and distributed as to facilitate the operations of trade.

The details connected with this scheme will shortly be laid before the Secretary of State for India in Council. Among the measures to be submitted are some the success of which will depend upon the reception accorded to them in this country, and it is this fact which makes it so desirable that the subject should have the benefit of the ventilation and discussion which will be given to it this evening under the auspices of this Society, to which Britain owes so much of her advancement in commerce and in the arts.

It will probably be known to many of my hearers that this subject has attracted the attention of the Indian Government, and that an important step in the direction indicated has already been taken. The suggestions about to be submitted being indeed little more than an extension of those measures which, with the sanction of the Secretary of State for India in Council, have already been

adopted, it may be well, in the first place, to state what these have been, and to point out the principles which have been kept in view in carrying them out.

Specimens of many important textile manufactures existing in the stores of the India Museum have been collected in eighteen large volumes, of which twenty sets have been prepared, each set being, as nearly as possible, an exact counterpart of all the others. The eighteen volumes, forming one set, contain 700 specimens, illustrating in a convenient manner this branch of Indian manufactures. The twenty sets have been distributed in this country and in India—thirteen in the former, and seven in the latter—so that there are twenty places, each provided with a collection exactly like all the rest, and so arranged as to admit of the interchange of references when desired. Each sample has been prepared in such a way as to show the character of the whole piece from which it was cut, and thus to enable the manufacturer to reproduce the article if he wishes to do so. In other words, the eighteen volumes contain 700 working samples or specimens. The twenty sets of volumes may thus be regarded as twenty industrial museums, illustrating the textile manufactures of India, and, in so far as these are concerned, promoting trade operations between the east and the west.

With reference to the disposal of the work, the original intention was that the whole of the twenty sets should be distributed in this country. Further consideration, however, pointed to the expediency, as well as the fairness, of placing at least a certain number of them in India, and this has accordingly been done. The interests of the people of India, as well as those of the people at home, were concerned in the matter, and it is clearly just and proper that both interests should be considered.

About two hundred millions of souls form the population of what we commonly speak of as India; and scant though the garments of the vast majority may be, an order to clothe them all would try the resources of the greatest manufacturing nation on earth. It is clear, therefore, that India is in a position to become a magnificent customer. She may yet be this, and still continue to seek her supplies in part from herself, for to clothe a mere percentage of such a vast population would double the looms of Lancashire.

To this country, therefore, these collections of samples are of importance, because they fairly exhibit the textile manufactures which suit the Indian market, but which have hitherto received too little attention in this country; and they illustrate the principles which must be observed in any attempt to introduce into India designs which will please the tastes of a people whose appreciation of art, as applied to textile decoration, is of a high order.

So high, indeed, is this taste, that one of the benefits which will be conferred on Britain by this and all like efforts to extend our knowledge of Indian art, will arise from the lessons in taste thus presented, enabling the home manufacturers not only to produce such articles as will suit India, but also articles which will be admired and thus obtain a ready sale in Europe. Our manufacturers, therefore, have a double interest in the scheme, because it will not only afford them the means of becoming acquainted with articles suiting the Indian market, but will help them to secure customers in their own and in other European countries.

To India, on the other hand, it is of importance in several ways. First, it is clearly to her advantage that every facility should be given to the introduction from this country of such manufactures as can be supplied to her people more cheaply than by hand-labour on the spot. The many will thus be benefited, and the hardships which may possibly fall upon the few will not be serious or long felt, since their labour will soon be diverted into new and, in all probability, more profitable channels.

It is impossible to say what the extension of the mill-system in India may ultimately lead to; and her friends would most unwillingly see its development fettered by

restrictions of any sort; but this is clear, that it will be a benefit to the mass of the people of India to be supplied with their clothing at the cheapest possible rate, let this be done by whom it may. Measures like the present, calculated to increase the range of competition, are therefore likely to benefit them.

Again, this scheme is of importance to India, because it will increase the number of her customers in other markets as well as in those within her own territories. There are certain fabrics which will probably always be best and most cheaply manufactured by hand. It is found to be so even in this country, where the powers of machinery have been pushed to their utmost. The hand-loom weaver still exists amongst us, nor is it likely that he will ever cease to do so. Less likely still is it that machinery will ever be able to drive him from the field in India. The very fine and richly-decorated tissues of that country will probably always require the delicate manipulation of human fingers for their production. In such manufactures, the foremost place will be taken by that country which can most cheaply supply labour, intelligence, and refined taste—all three combined; and this being the case, it is not likely that England will ever be able to compete successfully with the native manufacturer in the production of fabrics of this sort, for which, eventually, there may be a large foreign consumption.

But in addition to the facilitating of the introduction of cheap and suitable manufactures from Europe, and the extending of the knowledge of the productions which she is prepared to sell to other countries, India is directly interested in another respect. The distribution throughout India of a certain number of these sets of textile manufactures will serve to show one part of the country what is produced in others, a point of much importance, for the ignorance existing in India itself regarding the products and manufactures available for the purposes of commerce within her own borders is very great, numerous articles suitable for exchange and circulation within the country itself being unknown beyond the place of their production.

From this last point of view alone the work already accomplished is of value, and its extension cannot fail to affect advantageously both the internal and external trade of India. Although India may never resume her old supremacy as an exporter of manufactured goods, still there can be no doubt as to the right which the Indian manufacturer has to participate in the advantages of all measures like the present, so that he may be placed on an equal footing with the manufacturer of this country, and have the opportunity, if he has the power, of competing for the trade of his own and of other countries.

In assigning the sets of specimens of textile manufactures in trust to the chief commercial authorities in the selected places in this country, it was agreed that not only should those connected with the districts in which they are deposited have free access to the collections, but that similar facilities should be afforded to non-residents, or even to foreigners, practically interested in the subject, or to the agents of such persons. The interests of India require that nothing should be done to prevent her receiving the benefits which may arise from competition between different sources of supply, or to interfere with the extension to other countries of the knowledge of the products and manufactures which she is prepared to sell; and this makes it clearly desirable that the management and control of all such measures should remain with the Secretary of State for India in Council, in order that they may be so directed as to benefit India, and be above all suspicion of doing the opposite.

It is admitted to be for the mutual advantage of India and of this kingdom, that the most intimate commercial relations should exist between them. The tie is of a nature which makes this an object of paramount importance to both countries, and nothing will

conduce to this more certainly than a full and correct knowledge on both sides of what each produces and each requires. The means of acquiring this information, in so far as the textile manufactures of India are concerned, have, in the sets of volumes alluded to, been to a considerable extent afforded. The twenty sets already distributed may be regarded as twenty trade museums placed here and there in the two countries, and the information already received shows that they are being largely consulted by merchants, manufacturers, and others interested in the trade with India. The British manufacturer has it now in his power to become acquainted with a large class of goods likely to prove saleable in India, while the British merchant may find, among some of the delicate or elaborately-decorated fabrics, articles which it may be profitable to import.

Each set of samples being, as much as possible, an exact counterpart of all the others, it is easy for merchants, agents, or manufacturers in either country to refer their correspondents to the samples of the goods they wish to order. In this way merchants are enabled to give orders, and manufacturers to execute them, more readily and more accurately than they otherwise could. This facility of reference constitutes a special feature of this work, and renders the distribution of other manufactures and products by a similar method very desirable.

Collections of specimens arranged in the manner described become trade museums in the true and full sense of the word. Nor will their functions be confined to the facilitating of the operations of trade. Such museums, wherever situated, will become schools where youths intending to follow, or others actually engaged in, commercial pursuits, will have collections of manufactures and products presented for study precisely in that manner which is best calculated to impart the required information; and they present a field for technical education of the most practical description, the importance of which need not be dwelt upon.

Such, then, has been the nature of the action already taken in the subject which we are here to consider.

It will, I think, be admitted, that it is undesirable that this scheme should stop with the present effort. A large amount of information has been drawn together in the department of the Reporter on the productions of India, regarding all classes of Indian manufactures and of Indian products; and it would clearly be of advantage to this country and to India that this knowledge should be so disseminated as to prove practically useful—in other words, so as to influence the interchange of commodities.

Again, in this country, there exist now many productions which it is of importance to make known in India, and in no way, we think, could these two great objects be more effectually accomplished than in the one which, with the sanction of the Secretary of State for India in Council, has been chosen in the case of the textile manufactures of India. We shall accordingly proceed to present an outline of the further measures which it appears to be desirable to take in the same direction, and to indicate under what conditions similar efforts should be made.

In the division of the subject which has now to come under consideration, it will be submitted, in the first instance, that it is expedient to secure for the textile manufactures of India a more complete representation even than that already afforded; and, secondly, that steps should be taken to make India better acquainted with the corresponding manufactures of this country already available for the purposes of exchange. It is proposed, therefore, that these two great and important groups should first receive attention; for, although it is not expedient—nor intended—that the scheme should stop with simply the representation of the textile manufactures mutually produced in the two countries, it will be found that the methods and principles which apply to these are equally applicable to the case of a vast

number of articles which it is most important to make extensively and practically known.

Turning now to the question of a fuller representation of the textile manufactures of India, the series of samples already distributed—although very extensive, and allowed to be of much value—are not nearly so comprehensive as the resources at the disposal of the department are capable of effecting. In addition to numerous admirable examples of India textiles still existing in the stores of the India Museum, the collections forwarded from all parts of India to the late Paris Exhibition were of such extent that it was found impossible to exhibit more than two-thirds of the whole; and the result is that there now exist the means of getting up additional sets of specimens, which would completely illustrate the whole subject.

In the sets of collections already distributed, attention has been mainly directed to the illustration of the common articles of wear in India. The means now available will not only permit of the introduction into the proposed new series of many articles of the same class, but will also exhibit an almost exhaustive series of the finest examples of Indian art in textile decoration—the importance of the knowledge and of the appreciation of which in this country it is impossible to over-estimate.

The study of Indian art, as displayed in the decorated tissues of the country—the observation of the manner in which the two co-related forces, form and colour, are used in India to produce those beautiful combinations which are to the eye what chords in music are to the ear—may impart a power which, in numberless ways, will leave its stamp upon the everyday-life articles around us. But Indian art is not confined to textile decoration, although in this it stands without a rival. It is to be seen in hundreds of other instances—in almost everything the hand of the artisan touches; from the fan with which he cools himself, or the vessel from which he drinks, to the grand old buildings which, throughout the country, stand as monuments of a skill which is not dead nor even sleeping. With the decay of the ancient religions of the country, and with the downfall of her rulers, the demand for temples and palaces has passed away; but it is still the same power which we see exercised in other things, and it is this power which it is our duty to foster and to promote in India herself. Let us cherish this power, and be careful that we do not attempt to foist upon her people a style and state of art inferior to their own. And this leads me to remark, that the scheme which we are now considering would help to conserve and extend in India the knowledge of her own art. The distribution throughout India of the best specimens of her manufactures could not fail to have an important influence. The student in our Indian schools of art should first have presented to him all the best examples of his own country. Intuitively their superiority and perfection will be revealed; and, when he sees that we have realized this fact also, it will give that impulse and encouragement which hitherto have been wanting. Once show the native artisan or student that we, the rulers of the land, respect his art, and he will cease to try to please the European who, believing in the rose and daffodil patterns of his youth, has yet to acquire the power of appreciating the higher and more refined art of the people amongst whom for a time his lot has been cast.

Although it is impossible to speak too highly of the services of men who for years have devoted time and energy to the promotion of art in our Indian schools, yet there is no doubt that much valuable force has been wasted from neglecting to cultivate in our students the innate powers which they undoubtedly possess, and which have become dulled in the attempt to make them keep to the road which we in this country think to be the right one. A confirmation of this opinion is afforded by a letter lately received from one of the Principals in the Bombay School of Art, and formerly, I believe, a distinguished pupil at South Ken-

sington. Speaking of a student who had recently joined the school from a native town in the interior, and who, instead of being set to copy the figures, &c., in the elementary books of decorative art which, doubtless, are so useful here, was requested to try his hand on two subjects, both of which required the exercise of that inventive faculty which constitutes the artistic skill we ought to foster, and after expressing his admiration of his pupil's skill, and his anxiety lest he should in any sense cramp the powers which he so evidently possessed, he says—and to this I beg the attention of those who are looking to this country to teach art in India—"as a rule, those of my students who have come to me like this one, direct from the native town, without having received any instruction in the School of Art, are decidedly the best."

It is not to Britain, then, that India should be induced to look for art in those walks which chiefly bear upon her every-day life. Not that we should deny to the student the privilege of seeing and studying some of the best productions of art other than his own; but we must take care that these are the best.

Of Painting and Sculpture, India knows little, and it is only right that occasion should be taken to let her see good examples of both, for, it is under the influence of one and the same law that we are fascinated by a Turner's landscape—a Flaxman's statue—or the perfect tone and tune of form and colour, which are so often the fruit of Indian taste in decoration. All these are equally the children of art; and the day may come when the same power which the Indian artisan now shows will become developed in what would be considered the higher direction. Any way, the opportunity should not be withheld so long as the so doing is not allowed to interfere with a first duty, viz., that of fostering in India the art-power which already exists. Wherever and whenever possible, let us make the art which bears on every-day life an adjunct to trade.

The students of art in this country and in India will have presented to them, in the trade museums which it is the object of the scheme we are now considering to promote, the best examples of various manufactures, and these, from their beauty, will prove models of taste, whilst a no less important function—one with an immediate bearing upon trade—will be fulfilled by the facilities afforded to the commercial community in either country for direct reference to the actual examples of such goods as it may be desired to either order or supply. Everything in the way of European art, which it may be beneficial to exhibit in India, can be readily provided, without incurring the risk of having our museums started there upon an art instead of a trade basis, involving the waste of a force from the outset, which can and ought to be made directly subservient to the commercial interests of the country, using art as the handmaiden and not as the mistress of the position.

Returning, however, to the subject more immediately before us, we have now to consider to what extent, in this country and in India, the suggested new collections of specimens of the textile manufactures should be distributed. We have already indicated that, of the sets already deposited, thirteen have been utilized in this country and seven in India. Now, it is clear that, in order to derive the full benefits which the proposed system is calculated to afford, it must be extended so as to embrace within the sphere of its action many places other than those already favoured. In deciding to what places in this country the work already prepared should be given, those seats of commerce more immediately interested in textile manufactures naturally came first, and after these came such places as possessed industrial museums or other institutions calculated to afford the necessary facilities of access. The authorities in the selected districts, previously to the actual presentation of the work by the Secretary of State for India in Council, undertook—first, to provide for the permanent protection of the work, by placing it in a

suitable building, in the charge of a proper and responsible person or persons; second, to afford the requisite facilities for consulting the work, subject, however, to the condition that under no circumstances should any of the volumes be removed for the purposes of reference; and, thirdly, that access to the work should be given to any person bearing an order to that effect signed by the President, Vice-Presidents, or Secretary of the Society of Arts; the Presidents, Vice-Presidents, or Secretaries of the Chambers of Commerce; the Chairman or Secretary of the Association of Chambers of Commerce; the President, Vice-President, or Secretary of the Cotton Supply Association; the Chairman, Vice-Chairman, or Secretary of the Cotton Brokers' Association; the Chairman, Vice-Chairman, or Secretary of the Liverpool, East India, and China Association; the Presidents, Vice-Presidents, Chairmen, Vice-Chairmen, or Secretaries of such other Associations for the promotion of commerce as now exist, or may hereafter be formed; and by the Reporter on the Products of India. The foregoing conditions having, accordingly, been agreed to by the Chambers of Commerce of Belfast, Bradford, Glasgow, Halifax, Liverpool, and Manchester; by the Industrial Museum of Scotland, in Edinburgh; by the Industrial Museum of Ireland, in Dublin; by the Huddersfield Mechanics' Institution; by the towns of Macclesfield and Preston; and by the borough of Salford for the Royal Peel-park Museum;—a set of the volumes in question has been presented to each of these places, making, in addition to the India Museum, attached to the Department of the Reporter on the Products of India, thirteen places in this country where the work can be consulted by persons practically interested in the matter. With respect to the seven sets for India, these, under the instructions of the Secretary of State for India in Council, have been deposited in Calcutta, Madras, Bombay, Kurrachee, Allahabad in the north-western provinces, Lahore in the Punjab, and Nagpore in Berar. The distribution in this country, as will be observed from the list given, left many important places unsupplied, while, in one or two instances, some districts would almost appear to have been over favoured. Then, again, with regard to India. It is clear that the distribution of only seven sets there has only touched the borders of a great question, for to open up to us a vast country like India, and at the same time to exhibit her to herself, means a museum of the kind we have indicated in, at least, every main division throughout the country. With the resources at the disposal of the department at the time the volumes of textiles alluded to were got up, it was beyond our power to prepare more than twenty sets. Now, however, the case is different, for, with the increased facilities at command, it will be possible to supply as many as fifty sets, or even more, should they be required.

This, accordingly, is the present position of the matter.

We come now to the consideration of the question—Who should pay for this new effort to extend a knowledge of the manufactures of India? Hitherto all efforts on the part of the Indian Government to diffuse in Britain a knowledge of the products and manufactures of its great eastern dependency have been made at the cost of the people of India. Both countries, however, are interested. The India-office, in the sets of volumes already presented, has given evidence of its desire to promote the object in view; but, it is only fair that the expense of further efforts in the same direction should be divided; and, in so far as the suggested new sets of textile manufactures are concerned, I am assured that, should it be decided to get these up, the various commercial bodies in this country will be found ready to pay for them; indeed, offers to do so have already come to hand. But it is not only in the matter of textile manufactures that this country has received benefits for which she has never had to pay one farthing. The actual cost to India of the exhibitions of 1851 and 1862 amounted probably to not

less than two hundred thousand pounds. No part of this sum was defrayed by Britain, although it is impossible to over-estimate the influence which the great first, and never-to-be-equalled, exhibition exercised in directing the Government and people of this country to the wonderful products of Indian art. Many on that occasion were led to see that the country which they had been accustomed to think of as degraded and barbarous was our superior in much that constitutes civilization; and with the increased respect thus produced has come an increased sense of our responsibility as the trustees of the millions of people under British rule in India confided to our care. But it is not merely in the matter of the exhibitions that the Government of India has done, and is doing much to extend in this country a knowledge of what concerns both countries. The department of the Reporter on the Products of India was constituted for this very purpose, and is annually consulted by many hundreds of persons in quest of practical information bearing upon trade with India; while the beautiful collections which make up the India Museum, the result of selections from the best examples of manufactures and of art forwarded from India to the different European exhibitions, even in their present confined home, are yearly visited by from forty to fifty thousand people. All these modes of spreading a knowledge of Indian wants and of Indian skill and art in manufacture are placed at the disposal of this country through the enterprise of the Government of India and without cost to Britain.

The time, however, would seem to be approaching when the question may be asked as to whether this country should not give some help in providing a fuller representation of the customs, arts, manufactures, and products of India.

In the new India Office, provision has been made for the reception of all the productions, whether of artistic or of commercial interest, which are of most practical value; and it is anticipated that the museum which will be thus formed will, from an art point of view, prove a greater attraction than even the decorated structure which constitutes the new home of the Indian Government in this country.

When all this is done, however, there will remain many bulky objects of great interest for which provision will have to be made; and should the scheme which we are now considering receive the approval of the authorities, a considerable amount of working space will be required.

An opportunity is now offered of admitting the principle that this country should share in the cost which would have to be incurred for the two objects last named.

Pife-house—where the India Museum is already located, but from which its main glories will, as stated, very shortly be transferred to the new India Office—would afford the required space; and, as it belongs to the Crown, I have to submit the suggestion that, until other arrangements may be made, it should be assigned to the Secretary of State for India for the purpose here named. In this simple manner all that is necessary would be effected.

This would be not merely a graceful, but a wise act on the part of the Government. It would still leave the control where, as we have already indicated, it ought to be, viz., with the Secretary of State for India; and India would continue to pay the larger part of the cost, since the museum and its operations should be so conducted as to bear chiefly on the promotion of the prosperity of its people, the vastness of whose numbers and resources, and the peculiarities of whose position, will always require separate consideration.

Let us return, however, to the subject immediately before us:—

In so far as the textiles are concerned, materials exist for completing at once the representation of that important group of Indian manufactures.

But it is not in the matter of tissues only that India should be fully and practically exhibited, both to Britain and to herself. There are numerous other articles of manufacture, which are available for the purposes of commerce, and all of which can be exhibited in a manner which will facilitate the operations of trade, and promote, at the same time, the cultivation of the artistic skill of both countries.

So far, then, with regard to manufactures; but it is not in works of the hand only that India is rich; she is infinitely so in the products of her soil. Extending over a vast space of different degrees of elevation, it is not wonderful that the productions of India are as numerous as its surface and climate are diversified.

It is probable that there are not less than fifteen hundred different substances produced in India, which occupy a place of more or less importance in the economy of the people; and many of them, if better known, may become objects of trade or exchange.

Nor is it merely in what is now produced in India, that she and other countries are interested. With a soil and climate so varied, she is capable of producing every article that, up to the present time, may have taken a place in the commerce of the world. Hence the importance of not merely making India and other countries widely acquainted with the productions she is now prepared to sell, but likewise of showing to her the products of other countries which she may either use or produce. And in so doing it is essential that all substances—whether of vegetable, animal, or mineral origin—that have already taken a position in commerce, should be exhibited, not as mere specimens, but in such a way as will show their trade classification in the markets of the world.

In this manner the merchant or student in our India museums will become acquainted with those conditions of each substance which affect its price, and thus be impressed with the importance of quality and preparation as an element in trade success. The importance of quality upon the future of our Indian trade in cotton, we all know and admit; but let me illustrate what is here aimed at in the Product Department of our museums, by another fibre, say flax, which can be grown in many districts in India.

According to the proposed method, the flax group would exhibit not only a complete series, classified according to the designations which they have received in the trade—along with the average prices at different periods—but the opportunity would be taken to show the effect of condition in increasing the value of the same article. This specimen, say, is worth £30 per ton; this one, which is of the same growth and innate quality, is worth £40 per ton, because it is better cleaned; and so on throughout.

In order fully to represent the products of India, and at the same time to show not only to one part of India what the other is producing, but also to each part what it is itself yielding, it becomes necessary to take stock, so to speak, of the entire country; for although there is available a large amount of information showing the numerous articles that are produced in certain places, yet, taking the country as a whole, we are still in considerable ignorance of its resources.

In the scheme alluded to, one section is, accordingly, devoted to the measures for determining what the riches of the country really are. The process by which this could be systematically and quickly effected, has for some time occupied my thoughts.

I must hasten, however, to the next division of my subject.

Hitherto the measures required to exhibit properly the manufactures and products of India have only been spoken of. But has England nothing which it would be of moment to bring under the notice of the millions of India? We know that she has much. Just as England is India's best customer, so India is England's best customer; and it is to be hoped that the time will never

come when, through carelessness, or, shall I say, dishonesty, on this side, the bond of material interest that now binds the two countries together will be weakened.

It is impossible to divine what the future has in store for us in certain walks of commerce in which, at present, we stand pre-eminent; but this is certain, that our present duty is, by every fair means within our reach, to aid in the extension of the commercial relations which exist between Britain and India.

Let us now come to particulars, and see if, within the range of the scheme we have been considering, something might not be done to help in this; and first let me illustrate my meaning, by taking the textile manufactures of Britain as the illustration. The position, then, is this:—We, at present, yearly export to India some ten millions sterling worth of manufactured goods; these, in fact, constitute the bulk of the trade-stream which flows from this country to India. The fabrics which India buys of us, to the extent here named, are chiefly piece goods of the common class, suitable for making up in various ways; and although the loom-made and specially ornamented garments of the country—about which we have elsewhere spoken at length*—are those which open up such a large field to enterprise;† still, even the present trade in textiles is one which deserves to be cherished, for if through our own fault we lose it, the less likely will it be that our manufacturers will ever succeed in securing to themselves the supply of the many other classes of goods which are now open to their enterprise. Let the confidence of the people of India in the honesty of our goods be once fairly broken, and the first great step will have been taken to break our monopoly of a trade which, at its best, is an exotic.

But to continue:—I have to suggest, therefore, that a complete classified series of all the textiles which this country is in the habit of exporting, or is preparing to export, to India, might, with much advantage to this country and to India, be deposited in all our proposed India trade-museums.

These articles, or most of them, are doubtless well-known to the commercial communities of the Presidency and some to other towns in India. It is important, however, that facilities for becoming practically acquainted with them should be afforded to other places where, at present, they are but little known. Indeed, it is not unlikely that a museum placed in each of the great centres of our India import trade, and presenting, in an intelligible form, specimens of all these textiles, would teach even our merchants something. This part of the scheme also presupposes that the trade museums in this country should always, when possible, exhibit samples identical with, and bearing the same number as, those shown in India.

In short, such museums would, in the first instance, be designed chiefly for the mutual profit of Great Britain and great India, and would tend to tie the two great countries together by the surest and strongest of knots.

There are among the productions of certain places, like Bradford and Leeds, many fabrics which I am satisfied would take in India, and prove very saleable. Amongst these I would specify various light woollen cloths—many of them mixtures of cotton and wool—which would probably be most suitable substitutes in the Indian market for the thick cotton stuffs which the Indian himself makes, and which are so essential to his health and comfort at certain seasons of the year. It is a common error to suppose that warm fabrics are not required in India. Throughout a great portion of that country the suffering from cold during certain seasons, particularly at night, is as great as with us in Europe;

* "The Textile Manufactures and Costumes of the people of India," by J. Forbes Watson, A.M., M.D., Reporter on the products of India to the Secretary of State for India in Council; Wm. H. Allen and Co., 13, Waterloo-place, London.

† I am quite aware of the efforts which of late years have been made, more particularly by Glasgow and Manchester, to manufacture *Sarees* and some similar loom-made articles of clothing; the result, however, has been insignificant when we remember the extent of the consumption of such articles.

and, strange as it may appear to some, it is nevertheless a fact that cold is as prolific a source of disease and death in India as it is with us; for we have to recollect that the feeling of cold is to a great extent relative. A fall from ninety degrees of heat during the day, to fifty and sixty degrees at night, produces a most decided sensation of cold, and a consequent demand for warm clothing.

It would seem to me, then, that we are, at this very time, manufacturing certain goods for which we might at once find consumers in India; and the formation of collections of all such fabrics as we now make would enable the merchant or agent in India to see what we really have on hand, and thus give him the opportunity of ordering whatever fabrics, from his local experience, he knew would suit his customers.

With respect to the two sections of the textile manufactures of this country referred to, it would not appear to be expedient to make any distinction in favour of certain districts which may happen to be specially interested in some particular class of manufacture, as it is expected that there will not be any objection to these being fully represented in both countries;—by which we mean that, in addition to sets of samples of these being deposited in every museum in India, similar sets would likewise be distributed in all the trade museums in this country.

Regarding manufactures which are of general production throughout the country, there can be no doubt that these should be fully represented in the way indicated. But it is possible to conceive that there may be others—the special productions of certain districts, which it may be thought inexpedient to have fully exposed in this country as well as in India. In such instances, it would be open to confine the representation of such articles to our Indian museums and the local trade museum of the district which produced the articles in question.

It is only right that the possibility of a policy of this description should be considered, although I am inclined to think it one which will seldom be acted on; the broader, and, I believe, the better course being that of freely exposing the special manufactures of particular districts; for, as a rule, it is well known that orders are sent by preference direct to the head quarters of any particular manufacture, and publicity given to the fact that a particular place was noted for the production of certain articles, would much more than counterbalance any disadvantages arising from competition which might sometimes be engendered.

So far with respect to the special interests of particular localities. What has been said will apply equally to the case of the individual manufacturer or capitalist who, at great cost and skill, has produced articles which it is of importance to him and to the community to make known.

Returning once more to the main line of our subject, the question now before us is the propriety of forming collections calculated to represent in India the manufactures which Britain can supply to India. In treating of this branch of the subject we have, as yet, only alluded to textiles. But, has Britain nothing but textiles to give to India in exchange for her manufactures and her products? Let us ask Sheffield. Does she produce nothing which, if represented in our Indian trade museums, would bring orders from India? Or, turn to Birmingham, that great hive of industry, which you, sir, this evening, so worthily represent. Does Birmingham produce nothing that it would be of interest to her to have shown to the people of India? And so with regard to other places in this England of ours. Let us by all means see everything which she has got that will suit the purposes of Indian trade. In order, then, to carry out fully the scheme now presented, it becomes necessary not only to take stock, so to speak, of India, but of Britain also, to the end that her various manufactures, and the chief places of their production may be systematically and accurately given.

As regards this country, however, the required information, to a certain extent, already exists. Our various chambers of commerce, alive to the interests entrusted to their care, have, in connection with the proper representation, at the different international exhibitions, of the productions of the particular districts within their individual spheres of action, so far carried out this process; and they will probably be found ready, not only to approve of this supplementary course of action, but to promote, by all the powerful means they possess, the establishment of the trade museums here indicated.

This is a matter in which each chamber of commerce, as the representative of the interests of its own district, is specially interested; and, although there may be cases in which it may not apparently suit the interests of individual members to foster a scheme of this sort, calculated, as it may be, to lay open and extend a knowledge of the sources of supply of the various articles, &c., produced throughout the country, I believe that such views if they exist, will not be allowed to impede its advancement, if it be considered beneficial to the interests of the community in the districts in which the chambers may be situated. I am induced to make this remark from a circumstance which happened to myself, and which it can do no harm to put on record here. Some years ago—I am sorry to think how many—when I first brought forward the particular method of representing the textile manufactures of India, now carried out in this country and in India, I took an opportunity of consulting the President of a Chamber of Commerce, representing a city and district very largely interested in textiles and in the trade with India, as to the probable value of the plan now, I trust successfully begun, and was somewhat discouraged by finding that he, the chief in authority for the time being, and a man of great experience, could see no use for such a scheme, and no good in it if carried out. As I was not favoured with the grounds for this adverse opinion, and as the scheme had already received the approval of two of the most intelligent and influential members of the same chamber, I thought it might be well to make some inquiry as to the particular trade* in which my friend, the president's, pocket was interested, and I had not to wait long before I found the reason—my informant's exclamation being, "Oh! he is not likely to approve of your plan, for his firm, to my knowledge, is now doing a good stroke of business with even a few of the articles out of the large class of goods which you propose to tell everybody about!" All honour to the men who, through their own unaided enterprise, are doing "good strokes of business" in consequence of special information which they have made it their effort to obtain. It is to such men that we are indebted for the trade stream—small though it is as compared with what it might be—which flows between this country and great India—it is they who have helped to forge the link of self-interest which binds the one to the other; but this is no reason why the general interests of the community should suffer and not be promoted. The members of the chambers of commerce, who, throughout this country, at a sacrifice which is but little known, give their time and brains to the duties of their office, are, however, the men most likely to realise that what is for the general is also for the individual good.

My story is now ended. I have endeavoured, as briefly as I could, to present to you the main features of this scheme for the extension of the commercial relations between Britain and India, and I now leave it in your hands, assured that it will receive your best consideration.

* Each Chamber of Commerce comprehends, as a rule, members representing the special interests of each principal kind of trade carried on in its district, and no Chamber is efficiently constituted of which this is not true.

DISCUSSION.

Mr. JONES said he had some connexion with India, and he felt the force of one particular word which had been used in the paper,—viz., “honesty.” He knew there was sent from England to India a very large amount of deceptive work. Manufacturers in this country who had gained celebrity for their productions had their names or trade-marks forged to a large extent. This remark especially applied to the trade in which he was engaged—watchmaking; he had been informed that there was in the bazaars of India a particular class of watch known as the “*mock Jones*,” and he believed in that way very serious injury was being done to the English trade with India. Some years ago a Swiss manufacturer sent into the Chinese market a number of the commonest and most delusive watches for sale there, marked as English productions, the special object of which was to damage the character of English manufacturers, so driving them out of the market. He thought the people of this country had, in some respects, acted unfairly towards India. He recollected a discussion that took place in this room at the time when it was proposed to erect cotton factories in Bombay. The Manchester men denounced the measure as one which would be highly injurious to the manufacturing interests of this country, and they argued that it was best to confine India to agriculture, and that manufactured goods should continue to be supplied by England. When he recollected the fact that the region where the manufacture of the beautiful fabrics of Dacca was carried on had been almost desolated in consequence of the introduction of our goods into that country, he could not agree with the author of the paper as to the mutuality of the advantage that would accrue to the two countries if India were restricted to agricultural productions while England alone enjoyed the benefits of the higher profits realised by manufactures. Our own country was an example that those engaged in manufactures were better paid for their labour than those engaged in agriculture. The present condition of monetary matters between England and India was one which he thought the Government would do well to take into consideration, especially by equalizing the value of the rupee and the florin, the difference between which was very small. There was one point touched upon in the paper to which he would specially allude. He submitted it was not the province of the Government to ticket the price of our goods in museums all over a country like India. If the Government established these museums in the interior of the country, and put the price of the goods on them, it would embarrass trade, because an article would often be 50 or 100 per cent. more expensive a thousand miles up the country than in Bombay. He was sorry to hear such a proposal made by any one connected with a department of the Government. He thought that some one actually engaged in trade should be placed upon the Indian Council, so as to prevent such objectionable propositions from being put forward. He considered that a great deal of mischief had been done in India by the guaranteed railways going to continental manufacturers for their locomotives in preference to the English, for the natives of India would thus be led to think that we had no faith in our own manufactures. The reputation of the English producer was thereby damaged, especially when the blunder was made of buying things which were only half as durable as those of English make. Locomotives were placed upon the Indian railways which would run only 200,000 miles instead of 400,000, and yet there was only a difference in price of about £200.

Mr. JAMES SHAW remarked that considering the enormous territory in India which was ruled by this country, it was marvellous that we should know comparatively so little about it. We had not taken the trouble to know India as we ought; and it was only those who were more particularly connected with that country who paid any

attention whatever to it; they were, therefore, much indebted to the gentleman who had brought this very able and interesting paper before them. He was happy to see that a little more attention was being bestowed upon this great dependency of our empire, numbering as it did over 200,000,000 of population. But he was afraid the author of the paper had taken only a limited and departmental view of India. The whole gist of his proposition consisted in establishing trade museums in England and in India. Trade museums were all very well to a certain extent, but he thought we had had as many exhibitions as we cared about for some time to come; and he for one had no desire to see South Kensington multiplied throughout the country. He did not think it wise to stimulate to an extraordinary degree these trade exhibitions, which, he thought, had been overdone. At the same time, he believed there was a great deal to be done in India, but not in reference to art. The great bulk of the inhabitants of India knew nothing of art—the masses of the people were poor and ignorant—and he submitted that there were other walks in which we could more successfully benefit India than by promoting trade museums. The productions of India were annually increasing, both in value and bulk, and what we had to do to benefit that country was to make it more of a manufacturing country, so that they might not have to send the raw material to us and take it back again in the manufactured state, at a largely increased cost to themselves. He agreed with the first speaker as to the absurdity of the Government taking upon itself to ticket the prices of the products of any country; this would only impede trade. Being himself a manufacturer of iron, he asked what use it would be to send ticketed specimens of each descriptions of iron to the Hindoo? We could soon find out what the people of India wanted, and there was sufficient English enterprise to set about the supplying of these wants. Let them, therefore, hear less about trade museums. The subject was being overdone; and he could not concur in the very partial view as to the wants of India which had been taken in the paper they had heard this evening.

Mr. WM. HAWES could not agree with the speakers who had preceded him in their criticisms on the able paper that had been read, though he differed from some of the conclusions arrived at by Dr. Watson. He thought the first speaker was in error in supposing that that gentleman proposed that the manufactures should be sent out ticketed with the prices, unless in certain cases. All he desired was, that the two countries should be made thoroughly acquainted with each other's productions by the practical means which were suggested in his paper. As to decrying trade museums and collections of works of art, he (Mr. Hawes) had not expected to hear such a sentiment brought forward, particularly in this room at the present day. This Society prided itself especially upon having stimulated exhibitions of the works of art, and the productions of industry of all nations. It was the boast of this Society, that through its influence exhibitions of the manufactures of all countries had been held from time to time, and the best information possible given respecting the products and industries of every nation. The last speaker had said he had no desire to see repetitions of South Kensington. He (Mr. Hawes) would, on the contrary, be glad to see them all over the country. He believed that institution had done immense good in promoting the arts and manufactures of the country. It was an honour to the nation to possess such a museum, and, indeed, there was no other country that could boast of a similar collection. They had been told that exhibitions and museums were beautiful in theory, but that in practice they were a failure. He denied the correctness of the assertion. If the theory were good, it would be good in practice; if the theory of collecting these great works and stimulating the demands of a country was a good theory, then, he said, such a collection as that at South Kensington was a benefit to the industry of the

country. How was it that the French were surprised at the progress we had made in art, and that they sent a commission over to inquire how it was that we had advanced so rapidly, while they admitted they had not kept pace with us in that respect? It was especially owing to our having given to our workmen the opportunity of seeing the works of art collected by the Science and Art Department that we had produced so great an improvement in our manufactures as to make us rivals, in some respects, to a nation which produced works in the very best taste and at the cheapest rate. The paper they had just heard pointed in the same direction with regard to the arts, manufactures, and products of our great Indian empire. Perhaps Dr. Watson had assumed that the Government could do more than he (Mr. Hawes) thought was within its province. So long as it was merely proposed that the Government should use the means at its command for collecting every possible information on these matters, and also collecting and classifying specimens—so long nothing but the greatest good could arise from its action; but the Government should stop there. It had no business to recommend one branch of trade and discourage another branch. So long as it gave the legitimate aid to commerce which the proposed collections would afford, it was doing great service, and would tend to increase the respect in which the officers of Government were held by the natives, as well as to direct the industry of both countries into the best channels. With regard to how these museums were to be paid for, he thought if the Government of India had paid for the twenty collections already formed, it was of little consequence whether or not they paid for as many more; but whether this country paid for them, or whether this was done by the two countries jointly, he hoped nothing would be said or done to interfere with the proposed further action of the Government in the direction indicated this evening, as he strongly felt it was by the means of these collections that our commerce with India would be best promoted.

Mr. JOHN DICKINSON remarked that there were those present who recollected the time when it was questioned whether there was any use in giving information with respect to the products of India. In 1813 the East India Company thought the trade of this country with India could not be increased. It was then said that the natives had reached a certain degree of civilisation; that they had but few wants; and that they were more likely to contribute to our wants than we to contribute to theirs. The trade with India then amounted to only about three millions per annum; it had now increased to twenty-one millions. With regard to particular articles, he had known cases in which attention had been accidentally called to products hitherto unknown in this country, and a trade of several millions per annum had sprung out of it; and those products from India were paid for in British manufactures. The result of increased knowledge of the productions of the country had been the large increase in our trade with that country to which he had alluded, with the prospect of further indefinite increase. So far as the knowledge of each country's productions had extended it had tended to promote commerce and connect the two countries together on terms of friendship. In reference to the remark of a previous speaker (Mr. Jones), as to the increased price of articles in the interior as compared with the coast, that fact was sufficient to call attention to the importance of promoting the means of cheap transit in India. That was one of the things which Government had to do, and he hoped it would not be lost sight of. The only other point to which he would allude was the admirable and generous tone, not only of this paper, but also of most of the discussions which now took place on Indian matters, and it was pleasing to witness the philanthropic spirit which of late years had sprung up in reference to all that concerned this most important dependency of the British Crown.

Mr. DADHABAI NAOROI said that if there were any

gentlemen present who wished to confine India to agricultural pursuits, they appeared to have forgotten the fact that long before the savage inhabitants of this island knew how to clothe themselves, the people of India were clad in purple and gold; and if they were to credit such men as Mr. Owen Jones and Dr. Forbes Watson, India was still unsurpassed in the application of art to manufactures. India had been in early times the manufacturing country of the world, except China; and if, with her resources of steam-power and fuel, England had snatched from her some portion of her manufactures, she ought not to envy her the extension of her productive capabilities in other directions. It was upon no selfish ground that he spoke; for notwithstanding the advice that India should be kept to agriculture, they might be assured that the principles of political economy, and the natural laws of production, would always prevail. The Indian, they might be assured, understood his own interests, and knew when to buy a foreign article and when not to buy it. If England wanted to keep her hold on the commerce of India it was for her to learn the lesson that "honesty is the best policy," and that fairness of intercourse between the two countries would be the best for both. So long as England supplied manufactured articles better and cheaper than other countries, she might expect to keep the hold she had acquired on the commerce of India through her superior mechanical resources. If England and India, however, were to be mutually benefited by their commercial relations with each other, we must act upon the maxim that "Knowledge is power." We could never induce the people of India to approve of our articles unless we gave them a practical knowledge of those articles, nor could we obtain things from India without the same kind of knowledge. But for the great exhibitions that had taken place we should have been ignorant of many of those Indian productions which were so much admired in England and in France. He could conceive no better way of imparting the required information than that of adopting the plan of museums, which had been recommended so forcibly this evening. Let the great masses of the people see with their own eyes how cheap and good an article England could produce, and there would be no lack of customers for it. It was too late now to speak against exhibitions and museums. It was not the fault of the exhibitions themselves, but of those who entertained expectations beyond the legitimate scope of them, that they had not produced all the results anticipated. With regard to the proposition immediately under discussion, the Government of India were, as it were, placed between two fires; at one time they had the Manchester people down upon them with the complaint that they did not give sufficient attention to the commercial interests of our Indian empire, and at another time they were blamed for interfering with the commerce between the two countries. For his own part he thought the people of India would be two happy to allow this country to take upon itself all that it thought necessary to develop the commerce of the two countries; and in order to do that properly it was essential that they should have as accurate knowledge of each others productions as possible. Some unpleasant feeling was engendered when it was first proposed to establish mills in India; but it was to be borne in mind that there were 200,000,000 of souls there, and all the mills of this country could not supply even a small percentage of their wants. The field was large, let it be open, free, and honestly worked, and the whole world would be benefited.

Mr. PEARCE, in reference to the remarks of Mr. Jones, expressed his opinion that a Swiss-manufactured watch, of good workmanship, would be as much appreciated in India as one of English manufacture.

Dr. FORBES WATSON, in replying upon the discussion, said, with regard to the observations of Mr. Jones, he thought he might appeal to the meeting that if that gentleman had carefully listened to what he had read, he

would have discovered that one-half of what he said did not apply to it at all. With regard to the example he had given, of one particular sample of flax being marked as worth £40 per ton, and another as worth only £30, he need scarcely explain that he did not mean to imply that this price of £30 per ton was to be stated as a fixed price in any particular town in India, but was intended simply to represent to the mind of the Indian producer that a little more care bestowed upon the preparation of that article would make it worth £40 in the market instead of £30. He put it to practical men present whether that was not the kind of appeal which they should make to the people of India. With regard to the speaker who followed Mr. Jones, he seemed to imagine, in referring to the bulky article of iron, that it would be difficult to show it in the way he (Dr. Watson) had proposed, and that, therefore, his plan would be a useless one; he need not say this was a very partial view. The plan he had spoken of was not one which was untried, and, as far as it had been yet carried out, people in an important branch of manufacture had largely availed themselves of it with, it was to be hoped, benefit to themselves from the information they so derived. With regard to other remarks that had been made, he might say that it was not proposed that Government should interfere with trade in any way. The object of these museums was to give the fullest information in reference to trade. He did not propose to attach the market price of the day to articles, but merely to state the price on an average of one or more years in the chief marts of commerce. He believed these museums would greatly facilitate, in the way he described, the operations of trade between the two countries. It might be impossible to represent certain articles in the practical manner he had spoken of, but, wherever it was possible to do so, he said, let it be done.

The CHAIRMAN said he had now a duty to discharge, in moving that the hearty thanks of the meeting be given to Dr. Forbes Watson for the very able and interesting paper to which they had listened. From his intimate connection with chambers of commerce he knew something of the nature of their discussions. It might be imagined that amongst the commercial circles included in those chambers there was an immense amount of discussion on other markets than those of India. All the tariffs of Spain, Russia, and other countries were investigated with a minuteness which left nothing to be desired; but, excepting in Manchester, where the raw material going to that city became a natural subject of discussion, there was comparatively a great want of frequency of discussion, and consequently of knowledge, as to the purchasing power of our Indian empire. That being so, he was glad to find that by means of Dr. Forbes Watson's labours, and the diffusion of the knowledge of those labours which the publication of this paper would give throughout the country, some further inquiry was likely to be made with respect to the manufacturing and productive industries of India. If they considered the fact that our trade was being every year more shut out by the prohibitory character of foreign tariffs, we saw how important it was that this magnificent possession, which was one of the few in which we had the control of commercial operations, should be opened as far as possible to the manufactures of this country. He had no doubt the chambers of commerce would take up with vigour, in concert with this Society, any measures for increasing the mutual relations of India with England. He agreed with the remarks made as to importance of cheap transit in India, which would be largely promoted by the irrigation works advocated by Sir Arthur Cotton. No more valuable means could be taken for extending our commerce with that country. He begged to propose a cordial vote of thanks to Dr. Forbes Watson for his paper.

The vote of thanks was then passed and acknowledged.

Proceedings of Institutions.

NEW SWINDON MECHANICS' INSTITUTION.—The twenty-fourth annual report, for 1867, congratulates the members upon the general prosperity of the Institution. The number of members is 1,175. The library during the year has received additions to the extent of nearly 200 volumes, the number of books now being 3,879. Upwards of 100 volumes have been renewed, and 323 rebound; the number issued also shows a very satisfactory increase, being 12,742 against 9,902. With regard to the dancing class, the Council have continued to exercise a proper supervision over its management, and have the pleasure of knowing that the members generally are well satisfied with the manner in which it is conducted. Among the lectures and entertainments which have taken place during the past year was one by E. Wheeler, Esq., F.R.A.S., on "The Philosophy of Heat and Cold," and another on "The Sun and Moon;" one by the Rev. Hugh Stowell Brown on "Common Sense," and another on "The Good Old Times;" one by J. C. Daniel, Esq., on "Lord Nelson;" one by J. D. Muter, Esq., on "The Water we Drink;" several concerts; and two amateur dramatic performances. All these have been well attended. The thanks of the Council are due to Joseph Armstrong, Esq., who has kindly presented to the Institution the sum of £50, for the purchase of new books, and towards the furtherance of the other objects of the Institution; also to the Rt. Hon. S. H. Walpole, M.P., and Captain Bulkeley, for the sums of £5 each given to the Educational Board for the purpose of increasing the prizes. The educational classes were never better attended than during the past season, and the Council hope that the success of the students at the last examination of the Society of Arts may induce a greater number of those of the present season to come forward in the month of April, and that the Institution may stand in a still more honourable position than before in the next report of the Society's Examinations. The annual excursions so kindly and liberally allowed to the members of this Institution by the Directors of the Great Western Railway took place in the month of July, when about 1,800 excursionists were enabled to visit London, and 1,700 were permitted to take a trip to various places in South Wales. The statement of accounts shows that the receipts have been £757 15s. 2½d., and that there is a balance in hand of £90 17s. 10½d.

AGRICULTURE AND COMMERCE IN ITALY, AS COMPARED WITH ENGLAND.

Nations, like individuals, live either by production or by manufactures. In some cases a country is sufficiently fertile to be able to support itself by the fruits of the soil, and by the sale of the surplus to satisfy its other wants. Another country does not produce a sufficient quantity of food to maintain itself, but by the profits of its manufactures it is enabled to buy the necessaries of life from its neighbours.

Italy is a type of the first case, that is to say, a producing country; and England is a type of the other, viz., a manufacturing country. Italy ought, therefore, to be able—not only to produce enough for home consumption—but to have a surplus which, when sold to other nations, would enable her to pay for clothing, &c. In other words, Italy should import manufactured goods from other countries, and pay for them by the exportation of her products. In this manner agricultural industry should compensate for the absence of manufacturing industry. To see if this be the case is most simple. The purchase of that which is wanting in Italy is represented by the value of the imports, and the means for purchasing them is represented by the value of the exports.

The following table represents the exports and imports of Italy during the three years 1863, 1864, and 1865:—

ARTICLES.	Commercial Value of Imports.			Commercial Value of Exports.		
	1863.	1864.	1865.	1863.	1864.	1865.
	frs.	frs.	frs.	frs.	frs.	frs.
Wines, spirits, oil, &c.	36,724,407	45,410,051	38,624,754	88,959,028	91,062,214	115,111,524
Colonial produce, sugar, &c.	134,959,671	146,474,861	128,349,628	49,037,501	48,172,842	38,283,432
Fruits, seeds, herbs, and plants	5,540,562	7,485,071	5,667,924	66,677,300	63,849,455	67,465,154
Tallow and other fatty substances	18,259,085	20,929,691	15,991,361	9,646,400	11,570,757	11,597,959
Fish	18,732,157	17,130,801	13,232,563	1,269,381	1,521,840	849,482
Cattle	14,931,785	14,598,397	12,532,771	10,025,964	8,466,634	8,616,100
Skins and hides	36,326,876	34,492,233	29,587,237	10,732,298	7,713,991	4,505,036
Hemp and flax (raw or manufactured)	20,083,224	23,526,441	21,696,821	18,834,344	20,840,795	26,325,263
Cotton (raw and manufactured)	101,869,909	85,221,168	106,572,843	17,116,839	11,102,617	9,227,184
Wool, hair (raw and manufactured)	89,643,044	94,288,293	84,313,009	16,329,442	13,701,706	3,160,438
Silk (raw and manufactured)	183,280,882	141,149,201	168,477,975	254,281,489	205,839,154	148,900,414
Corn, cereals, flour, and pastes	121,358,305	201,175,832	152,192,432	57,166,731	39,676,810	43,785,131
Timber and woodwork	17,444,633	28,101,039	20,362,923	11,873,692	8,302,572	8,945,685
Paper and printed books	6,589,627	6,273,908	5,508,239	6,685,690	6,530,419	6,881,084
Hardware and cutlery of all sorts	52,700,078	47,218,732	44,113,100	25,429,353	27,970,284	16,464,317
Metals and metal goods	66,312,366	65,604,400	60,480,174	53,832,290	14,972,518	3,613,798
Gold, silver, and precious stones, Jewellery	7,657,775	7,940,871	3,939,136	1,897,913	4,159,482	2,966,394
Stone, earthenware, glass, &c.	22,103,155	26,612,721	22,366,757	41,453,835	42,810,417	40,762,081
Porcelain, earthenware, glass, &c.	13,385,847	14,805,414	15,505,612	840,092	1,357,165	709,382
Tobacco	14,340,314	64,287,166	15,658,513	3,419,054	2,302,031	156,733
Total frs.	982,293,852	1,092,726,341	965,173,672	700,265,636	631,923,793	558,285,576
Total £	39,291,754	43,709,053	38,606,947	28,010,626	25,276,951	22,331,423

Thus it will be seen that in 1863 the value of the imports amounted to 282,028,016fr. (£11,281,120) more than the exports; in 1864 to 460,802,638fr. (£18,432,105); and in 1865 to 406,888,096fr. (£16,275,523). From this it is very evident that Italy buys more than she sells. Taking only the products of agriculture, the first 13 items of the above table, it will be seen that they are not sufficient for home consumption, and that in 1864 the imports exceeded the exports by 329,010,720fr. (£13,160,429). From this it will be seen that commerce altogether is in a very bad state in Italy, and that agriculture is still worse, representing three quarters of the excess of imports over exports. So that, if this state of things be not speedily remedied, the country will become bankrupt. To get out of this difficulty it is necessary that the nation should produce. The taxes on agriculture are enormous at the present time, because they do not know how to manage. When Italy can produce 25 hectolitres of corn per hectare (28 bushels per acre), when a hectare of grass will produce 120 quintals of hay (10,688lbs. of hay per acre), and a hectare of vineyard will yield 100 hectolitres of good wine (900 galls. per acre), then the taxes will be paid, leaving a good profit for the agriculturist. The natural requirements of agriculture are not many—land, water, and manure. These are not difficult to satisfy. Land is not wanting in Italy; there are abundance of rivers and streams, and canals should be constructed to irrigate the land where the supply of water is insufficient. The manure would be furnished by the cattle. What is required in Italy is the knowledge to profit by these natural advantages, *saper fare*. Agricultural instruction should, therefore, be encouraged by the Government, and everything done to aid the population in acquiring this knowledge.

In order to produce 25 hectolitres per hectare of corn, the use of manures is indispensable, and to obtain this a greater stock of cattle should be kept. This will be seen by comparing the quantity of cattle in Italy with that of Great Britain, where the average production of corn is even more than 25 hectolitres per hectare, viz., 27 bushels per acre.

The total number of each description of live stock in the several divisions of the United Kingdom in 1866 was, according to the statistical notes on the industries and commerce of the United Kingdom, published by the British Commission at the Paris Exhibition—

Cows	3,381,568
Other cattle	5,184,900
Sheep	26,374,685
Pigs	3,993,506
Horses	1,606,095
Total	40,540,754

From the latest returns the quantity of live stock in Italy in 1865 amounted to—

Cows and other cattle	3,708,635
Horses, mules, asses	1,391,626
Sheep and goats	11,040,339
Pigs	3,886,731

Total 20,027,331

The total extent of land under cultivation in the United Kingdom amounted, in 1866, to 44,369,000 acres. Italy has 46,972,226 acres of land under cultivation, not including about 9,880,000 acres of wood.

The following will show the proportion of cattle per acre in the United Kingdom and in Italy:—

	In Italy.	United Kingdom.
Cows and other cattle	·078	·193
Horses, mules, asses	·029	·036
Sheep and goats	·232	·594
Pigs	·092	·090

Although the proportion of cattle per acre in England is superior to that of Italy, the English imported, in 1865, the following amounts of materials for manures:—

Bones	65,650 tons
Guano	237,400 „
Other materials	802 „

amounting altogether to the value of about £3,087,000 sterling.

In Italy, in 1864, the imports of materials used as manure amounted to 31½ tons, of the value of £6,254, and the exports amounted to 16 tons, of the value of £3,209; deducting the amount of exports from the value of the imports, there remains £3,045 spent in foreign manures. Thus, where the English spend £1,000 the Italians spend £1.

TECHNICAL AND SECONDARY EDUCATION IN FRANCE.

M. Duruy, the Minister of Public Instruction, is indefatigable in his endeavours to extend and improve the system of instruction in France. It is admitted by all who are acquainted with the schools of France, that the teaching of modern languages has hitherto been of the most superficial and unsatisfactory kind, and no normal school has hitherto existed for the formation of sound teachers in this branch of education. The minister has just created, at the new technical normal school of Cluny, a special section for modern languages. The course of study in the new section will be of the same duration as that of the section of sciences, namely, two years; but after the expiration of that period of study, and practice in the college annexed to the normal school, the pupil

teachers are to be sent for a year to the country whose language they profess to teach, and will be required to write every week to their professor in that language. The pupils are to be placed in public schools, so that they may not only complete their knowledge of the language of the country, but also study its method of teaching, and pursue their general studies.

The Emperor and Empress paid a visit the other day to the laboratories of the Ecole Normale Supérieure and of the Sorbonne. At the former establishment, M. St. Claire-Deville is engaged, at the instance of his Majesty, in making a series of experiments on the calorific value of mineral oils, and exhibited the principal results which he has already obtained.

It appears that the Emperor has in view the use of these oils for the heating of the boilers of the vessels of the Imperial Navy; and one object of the experiments in question is the prevention of the dangers arising from the explosive nature of petroleum.

Their Majesties then visited another laboratory in the same school, in which the pupils were engaged in their studies, and were presented to the Emperor and Empress by their professor.

The next visit was to the laboratory at the Sorbonne, under the direction of M. Jamin. This establishment is quite a new one; its object being, to quote the words of a French writer on the subject,—"To emancipate the experimental sciences from the difficulties which surround their early study. The scientific eminence of France depends upon such measures." It is said that fresh impulse is about to be given to these and other valuable means of diffusing scientific instruction. M. Ruhmkorff was introduced to their Majesties, and exhibited the wonderful effects of his induction coils.

This Imperial visit, and other circumstances of daily occurrence, show the deep interest that is felt for scientific and artistic instruction, in order that France may maintain her high place in many of the arts, and improve her position in others.

Fine Arts.

SOUTH KENSINGTON MUSEUM.—Visitors to the Paris Exhibition may have remarked, at the end of one of the passages in the British section, a large yellow majolica column, with white relief ornament upon the surface. The ceiling of the new refreshment rooms, recently opened at the South Kensington Museum, is supported by four of these columns, which are worthy of careful inspection. They have been manufactured by Messrs. Minton, from designs by Messrs. Gamble and Townroe, founded on suggestions of the late Mr. Godfrey Sykes. The introduction of porcelain for the enrichment of the ornamental portions of columns is not an entire novelty; but a complete porcelain column is believed to be without a precedent. It is intended that the walls of the refreshment room shall be covered with majolica tiles, with a low relief ornament on them. A small staircase at the west end of the refreshment corridor has lately been opened; the designs are by Mr. F. Moody, and the works are still in progress. The portions of the decoration already completed and fixed, promise to render this staircase an attractive feature of the museum. The staircase is what is called a barrel-vaulted one; its sides are panelled and decorated with enamelled earthenware by Messrs. Minton, in imitation of the Della Robbia ware. The dado, or skirting, is exceedingly rich in design. At intervals of three steps, caryatids support a cornice, from which it is evident that a handrail will project; the spaces between the caryatids are filled with panels in bold relief on a celadon ground. Between the dado and the cornice above are panels also in glazed pottery, with bas reliefs of figures holding shields; the design of these bas reliefs is peculiar, and of a varied character. At the top and bottom of each flight are pilasters, which support

the arches against which the barrel vault butts. The spaces in the domes over the landings are at present incomplete. The propriety of using glazed pottery for the sides of a public staircase is apparent. The facility of cleaning the surface of the decoration, and the durability of the pottery, are both facts recommending the judgment displayed by the management of the museum in its selection of a good, decorative, and lasting material. Messrs. Minton have, perhaps, hardly reproduced the effect of the old Della Robbia ware, inasmuch as their glazing rather softens the lines of the details instead of leaving them sharp as the artist intended. The old Della Robbia glazing was so exceedingly thin that it did not obliterate the sharpness and crispness of the modelling. Again, the glitter of Messrs. Minton's enamel is distracting, and it does not seem so opaque as the ancient enamel. These observations on modern enamels, as compared with ancient ones, are applicable to the copies of the Henri Deux ware exhibited in the south court of the museum, which are placed near the originals, the difference in quality of the glazed surfaces being very palpable. Some stained-glass windows, which were exhibited by the Science and Art Department at Paris, are in course of being fixed, two on the north-east staircase, and one in the refreshment rooms.

Manufactures.

EXHIBITION OF REAPING AND MOWING MACHINES IN BERLIN.—An exhibition of the above-mentioned machines is to take place in Berlin, commencing on the 13th and ending on the 19th of July. This exhibition has been organised by the Société d'Agriculture de Marc-Brandebourg and Niederlausitz, and is to include the three following classes of implements:—1. Reaping machines, with arrangement for laying the cut corn in rows.—First prize, a gold medal and £30; second prize, a silver medal and £23. 2. Reaping machines without such arrangement as that above mentioned.—First prize, a silver medal and £15; second prize, a sum equal to £7 10s. 3. Mowing machines.—Prize, a silver medal and £7 10s. The machines are to be tested in the first place by means of the dynamometer, and afterwards each separately in the field. The exhibitors may if they please employ their own teams, and try their machines on crops which will be placed at their disposal for that purpose by the society. Applications are to be made, before the first day of June, to M. Le Conseiller V. Schmidt, No. 27, Mattaikirsch-strasse, Berlin.

Commerce.

TREATIES OF COMMERCE.—The late changes which have taken place in Europe seem likely to produce considerable changes in their commercial relations. The cabinets of Paris and Berlin are said to have arrived at an understanding respecting the annulling of the existing treaty between France and Mecklenburg, and the concessions to be made by Prussia in consequence, not only to France, but to all those states with which treaties have been made. One consequence of the arrangement resulting from this understanding will be the admission of the Grand Duchy into the Zollverein, and another, the conclusion of a treaty between the latter and Austria. Other important negotiations are also on foot between the German States and Austria; thus, it is said that Bavaria and Saxony have been invited by Prussia to enter into an arrangement for the new commercial treaty to be made between the last-named country and Austria. Lastly, it is asserted that Prussia and Austria are engaged in attempts to induce Russia to review her commercial tariff; the customs duties on the Russian frontier weigh heavily on Austria. Heretofore the government of Saint

Petersburgh has declined to make any new treaties with either of her neighbours, but it is said there is a disposition at the present time to make concessions with respect to some important articles of commerce. This expectation seems supported by the facts which have lately been published respecting the growth of Russian commerce, and the improved tone of the governmental journals of Russia with respect to all commercial questions. The new arrangement of political boundaries in central Europe renders some changes inevitable, and there seems fair reason to suppose that such changes will be in favour of an increased amount of commercial freedom.

COFFEE TRADE OF THE UNITED STATES.—It appears from the *Produce Markets' Review* that there are indications of the steady revival of this branch of commerce in the United States. The paralyzing effect of the war has almost passed away; and both imports and consumption for the past year, though not yet on a level with 1858, bid fair, if they progress at anything like their present rate, to exceed them in a very short time should the existing depression in the trade be removed.

THE WINES OF SPAIN AND PORTUGAL.—It appears, by the circular of Messrs. Matthew Clark and Sons, that the shipments of wines from Cadiz to all parts, during the past year amounted to 63,415 butts, being an increase of 2,150 butts over the previous year, while those from Oporto reached only 34,680 pipes, being 5,820 pipes less than in 1866. The shipments of wine to this country from Tarragona, during 1867, amounted to 9,000 pipes, against 9,800 pipes in 1866, and 5,900 pipes in 1865. The moderate prices ruling for the red wines of the North of Spain cause a steady increase in the home consumption.

Colonies.

RAILWAYS IN VICTORIA.—The revenue of the government lines still continues to show a decrease as compared with that of the previous year. The total revenue up to 14th November, 1867, was £456,008 18s. 5d., whilst for the corresponding part of 1866, it was £500,737 11s. 8d. The following is the return of the monthly revenue of the Victorian railways:—

Railways.	Passengers.			Goods.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
Murray River Line	7,600	12	10	17,873	6	9	25,473	19	7
Williamstown Line	1,687	12	8	1,245	8	2	2,933	0	10
Ballarat Line.....	7,668	6	6	8,418	5	8	16,086	12	2
	16,956	12	0	27,537	0	7	44,493	12	7

Obituary.

C. THURSTON THOMPSON, the well-known photographer, died at Paris on the 20th of January, after a painful illness and considerable suffering. Since his return from Spain, in the early part of 1867, his health has been anything but good, and during his stay in Paris, where he was assisting in the arrangement of the photographic section of the British portion of the Exhibition, he was the victim of two very severe attacks of jaundice. He was the son of the eminent engraver, Mr. John Thompson, and was born in 1816. After receiving his education at Dr. Mitchell's, in Kensington, he studied the art of wood engraving under the able tuition of his father, and soon became an expert in that art. He drew and engraved a considerable number of the illustrations of "Yarrell's British Birds." Associated with Mr. Bingham, he was appointed to superintend the production of the photographs which were taken of the Exhibition of 1851. In

the following year he proceeded to Paris, and remained some time in Mr. Bingham's studio. On his return to England he received a commission from the Department of Practical Art to photograph the collection of furniture then being exhibited at Gore-house, where the department was located temporarily. In 1855, as in 1851, and subsequently in 1862 and 1867, he was appointed Superintendent of the Photographic Class of the British Section of the Exhibition. Whilst in Paris he executed photographs of objects selected from French provincial museums. In his own special department of photography, the reproduction of pictures and works of art, he had no equal in this country and was unsurpassed by any abroad. His refined taste and knowledge of art, derived from his early training, rendered him peculiarly fitted for his work; and in consequence of his distinguished abilities he was permanently appointed official photographer to the South Kensington Museum in 1856, after his return from the Paris Exhibition of 1855. It would be almost impossible to enumerate all his works, but it may be interesting to state that amongst his foremost are the photographs of the Raffaele cartoons, Turner's "Liber Studiorum," Her Majesty's collection of arms at Windsor, the wedding presents of H.R.H. the Princess of Wales, many objects from the Kensington Museum, and lastly, and perhaps most important, an exceedingly interesting series of photographs of the collections belonging to the King of Portugal in the royal palace of Necessidades, at Lisbon, and a series of photographs of ancient ecclesiastical and domestic architecture in Spain. His loss to the Photographic Society, in which he was for many years an active member of the council, as well as to the South Kensington Museum, is indeed a severe one.

Notes.

ROYAL ACADEMY OF MUSIC.—A paragraph in the *Times* says that this institution having struggled for nearly half a century to support itself on the voluntary principle, by subscriptions, balls, concerts, &c., has been obliged to decide on closing its action. The surrender of its charter has been offered to the Government. It is stated that the directors will cease to act in March next.

RESEARCHES IN SIBERIA.—At a recent meeting of the Russian Imperial Society of Geography it was announced that Mr. Poliaskoff had traversed the country of the Baikal, during the months of June and August, in order to make barometrical and thermometrical observations, and that in the neighbourhood of Tounska he had found ancient weapons, principally arrows, the points of which were of cornelian and jade; this interesting fact has given rise to a search being made for deposits of jade on the banks of the Onote, a tributary of the Angara. Mr. Pontzillo has collected and carried home specimens of more than a thousand kinds of insects, and Mr. Przewalsky a collection of plants and birds from this inhospitable and little known region. A series of meteorological observations is about to be carried out in the same country on the same bases as that adopted for European Russia.

THE CAB QUESTION.—It appears by the *Globe* that a deputation of hackney carriage proprietors waited on Monday on the Chancellor of the Exchequer to ask that the duties paid on cabs might be reduced, and the licence be made annual and payable in August, at which time the trade is comparatively idle and very little loss would accrue to the proprietor in getting his cab passed. Mr. Alderman Lawrence, M.P., in introducing the deputation, said he considered their complaint was one that called for attention. The public complained of the hackney carriages, and he was bound to admit that they were not equal to the public conveyances on the Continent; but he believed this was owing in a great degree to the very heavy duty, £19 5s., payable by the proprietors for each cab, as payment of such a sum pre-

cluded a person investing capital that was subject to so large a duty. When the Act passed in 1853, regulating the present fares, corn, hay, and all kinds of fodder were not much more than one-half the present price; and, beyond this, the rent of stabling had much increased since that time, and the profits of the proprietors were lessened in consequence of the connexion of the various railways, the cabs not being required as they used to be. The Metropolitan Railway now carried passengers at so small a price from the west-end to the city, and so expeditiously, that cabs had lost one of their principal sources of profit. Since the passing of that Act the duty had been materially reduced upon stage carriages, but no alteration had been made as to the hackney carriage duty. Upon all these grounds he therefore asked that Her Majesty's Government would be pleased to take the matter into their careful consideration. Mr. Gower (of the Barbican) and others having addressed the right hon. gentleman, the Chancellor of the Exchequer said,—"I have had much pleasure in receiving this deputation, and hearing the remarks made by Mr. Alderman Lawrence and Mr. Gower, and the manner in which the last speaker has treated the subject. I may say personally I have a very great objection to taxing locomotion in any way, and am quite aware that the hackney carriage trade in London has many disadvantages that do not arise in foreign cities. I am prepared to say that the whole matter shall receive the most careful consideration of Her Majesty's Government and myself; but at the present time, seeing that there is a decreasing revenue and increasing expenditure, I am not prepared to say what the result of those deliberations may be, but I feel certain that, should there be a reduction in the duty, it will be for the mutual benefit of the proprietors and the public."

Correspondence.

NATAL.—SIR,—I regret that I was unable to attend Dr. Mann's valuable paper on the colony of Natal. Among other points, I wished to mention the successful propagation, by my relative, Mr. John Vanderplank, of Pietermaritzburg, of Turkish silkworm eggs, and of Turkish tobacco seed by Mr. John Robinson, M.L.C., who has done so much for Natal as a journalist, and a promoter of public improvement. I furnished them, at their request, with these productions of Turkey; and I think it much to be desired that other suitable productions of Asia Minor should be tried in the congenial climate of Natal.—I am, &c., HYDE CLARKE.

32, St. George's-square, S.W., 31st January, 1868.

THE ARTISANS' REPORTS.—SIR,—My attention has been directed to Mr. Hawes's summary of the reports of the artisans sent by your Society to the Paris Exhibition, published in the *Journal of the Society of Arts* of January 24th. With regard to his epitome of my own report, I find that Mr. Hawes gives it "much foreign work superior to English, &c." I beg respectfully to submit that it was by no means my intention to convey any such impression, nor do I think that my report will be found upon examination to favour any such conclusions. It is true (and it would be strange if it were otherwise), that I found some goods by foreign manufacturers that I thought worthy of commendation, but these generally were articles unimportant in themselves, or of a class not usually manufactured in this country; and I indicated them more as a warning for the future, than on account of their own intrinsic excellence. My general impressions I thought I had broadly and clearly stated when I wrote, "I think it will be conceded that in the higher branches of what may be called the regular Japan trade, the English are far in advance of the foreign exhibitors. In the papier-mâché branch especially, whether for form, surface, or ornamentation, the English work is generally superior." I am afraid that we are getting too much into the habit of advertising the

superiority of continental productions, and, under the appearance of candour, decrying our own. Such a course cannot fail to exercise a most injurious tendency, and will, by fostering a taste for foreign manufactures, prove very detrimental to our own.—I am, &c.—THOMAS ARCHER.

159, Moseley-road, Birmingham, Feb. 3rd, 1868.

OUR MARKETS.—SIR,—It may appear somewhat extraordinary at first sight, that handsome and convenient markets may be built in appropriate situations, replete with every appliance for the purposes of trade, and yet not be frequented by those for whose convenience they may have been expressly intended. May not the solution of this difficulty be found in the two words "market tolls," which are apparently intended to recoup the undertakers for the cost of the market buildings; but, although the original outlay may have been repaid over and over again, tolls still continue to be levied, and are generally farmed out to the highest bidder, who has sometimes but little scruple in enforcing his rights by any means. Tolls are also demanded for open standings in the street where no expense has been bestowed. The more cogent reason for such an impost may perhaps be found in the fact, that all municipalities are governed by the principal well-to-do tradesmen of the respective localities, who cannot be supposed to look with favour upon those persons who occasionally visit their town for the purpose of selling at a rate somewhat lower than the regular shop prices. It is therefore their interest to maintain the system of market tolls inviolable, in order to keep up prices; and they claim the power of putting on such tolls as a right, because they pay rates and taxes, which the market people do not, entirely ignoring the fact that the market people pay rates and taxes at home. This specious argument has no foundation, because it can be shown that town tradesmen's rates and taxes are not paid by themselves, but by the consumer. For if the town tradesmen were to be relieved by any means from that burden, competition in trade would soon bring down prices to their proper level, and tradesmen would be no better off than they were before. The consumer, therefore, not only pays his own taxes, but also those of the tradesman with whom he deals. The only alleviation for this grievance to the consumer would be, the power of purchasing from market people. Here the town tradesman steps in, and says that the consumer shall not purchase at a lower rate, and contrives a system of tolls that will effectually prevent that result. In effect, they cause the market people to pay rates and taxes, or their equivalent, at home and at market also. So the poor consumer—the affluent care nothing for prices—is compelled to pay rates and taxes, or their equivalent, for both the tradesmen and the market people, besides his own. I do not allude to the fashion of late, for town tradesmen to absorb nearly all the market-standings, because, with the disappearance of the tolls that fashion will also disappear. If, therefore, it should be deemed expedient to establish a new market in some well-adapted locality, it will be necessary, in order to ensure success, to raise the funds by subscription, and make the stalls and standings free to all who can show a title to some degree of respectability according to their rank and station in life; all expenses of supervision being, of course, borne by the town rates. Markets cannot, however, be made thoroughly respectable, until we shall be able to eliminate, or at any rate diminish, the crowds of disreputable persons who attend to carry on nefarious trades, and who do not pay market tolls. The legislature has given us free-trade in corn, but owing to corn exchanges free-trade is not yet; no man can transact business in a corn exchange unless he be in possession of a high-priced stall, and in many exchanges an additional charge is made at the door. Certainly, free-trade is not yet; and innumerable instances may be shown that fierce protection is still the rule, not the exception.—I am, &c., HENRY W. REVELEY.

Baker-street, Reading.

To Correspondents.

ERRATA.—In last *Journal*, p. 218, col. 1., line 42, for “£4,” read “4s.,” also, at top of col. 2, the statement should be that “freehold allotments of 200 acres” are given to suitable settlers, not that they may be “bought.”

MEETINGS FOR THE ENSUING WEEK.

- MON.....**Society of Arts, 8. Cantor Lecture. Dr. Letheby, “On Food.”
R. Geographical, 8½. Captain Sherard Osborn, “On the Exploration of the North Polar Region.”
- TUES ...**Medical and Chirurgical, 8½.
Civil Engineers, 8. 1. Renewed discussion upon “The Fresh-water Floods of Rivers.” 2. “Floods in the Ner-budda Valley.” And (time permitting) 3. Mr. W. J. McAlhine, “On the Supporting Power of Piles; and on the Pneumatic Process of driving Iron Columns.”
Photographic, 8. Annual Meeting.
Ethnological, 8. 1. Prof. Busk and Mr. John Evans, “On Human Remains and Works of Art found in the Tumuli and Caves of Portugal.” 2. Rev. — Houghton, “On the Hairy Men of Eastern Asia.” 3. Dr. Hyde Clarke, “On the Varini of Tacitus.”
Royal Inst., 3. Professor Tyndall, “On the Discoveries of Faraday.”
- WED ...**Society of Arts, 8. “Report on the Art-Workmanship Competition, 1868.”
Microscopical, 8. Annual Meeting.
Graphic, 8.
Literary Fund, 3.
Archæological Assoc., 8½.
- THUR ...**Royal, 8½.
Antiquaries, 8½.
Zoological, 8½.
R. Society Club, 6.
Royal Inst., 3. Professor Tyndall, “On the Discoveries of Faraday.”
- FRI.....**Astronomical, 3. Annual Meeting.
Royal Inst., 8. Professor Roscoe, “On Vanadium.”
- SAT**Royal Inst., 3. Professor Roscoe, “On the Non-Metallic Elements.”

Patents.

From Commissioners of Patents Journal, January 31.

GRANTS OF PROVISIONAL PROTECTION.

- Bags for the conveyance of samples by post—216—W. Davis.
Baskets—151—J. G. Rollins.
Beer and wine finings—212—W. J. Coleman.
Boilers—204—J. F. Spencer.
Bonnets—147—H. B. and A. M. Murrell.
Brick kilns, &c.—155—F. Postill.
Brushes, painting—119—C. A. Watkins.
Bullets—184—J. Davidson.
Busk fasteners—153—G. E. Reading.
Capsules, &c.—150—W. Betts.
Churns—210—L. N. Le Gras.
Combs or reeds, expanding and contracting—194—M. Robinson.
Cotton, &c., pressing—3635—C. G. Wilson.
Cradles, aerial—127—A. B. Boyer.
Engines, carding—173—T. B. Kay and F. Hamilton.
Engines, motive-power—189—D. Timmins.
Fabrics, piled—145—R. Schneider.
Fabrics, textile—137—J. Parker.
Fabrics, treating woven—122—C. D. Abel.
Fences, wedging and fastening—110—W. D. Young.
Furnace linings, &c., composition for—131—G. Nimmo.
Furnaces—139—J. Head.
Furnaces, &c.—24—C. Long.
Furnaces, &c., obtaining and applying hydrogen gas to—3580—J. Stanfield.
Gaiters and bootakins—140—W. Wilkins and W. G. Pollard.
Gas-heating and cooking apparatus—146—C. E. Brooman.
Glass bottles, &c., filling with soups, &c.—171—J. Winter, jun.
Grass and corn cutting machines—133—D. Hodson and J. Dodd.
Harness, &c., links for—187—G. S. Fisher.
Hay, straw, &c., cutting—170—G. S. Fisher.
Heavenly bodies, apparatus for indicating the relative positions and movements of certain of the—214—J. H. Johnson.
Instruments used in drilling, &c., hard material—162—J. Hosking, jun.
Iron and steel—149—J. A. Jones.
Iron ores, treating—164—H. Aitken.
Kilns for baking porcelain, &c.—185—W. E. Newton.
Kitchen ranges, &c.—188—F. J. Baynes.
Lath cutters—168—N. H. Rolfe.
Light, obtaining artificial—138—J. Kidd.

- Looms—126—T. Sagar and T. Richmond.
Looms—134—J. Hudson and C. Catlow.
Looms—143—J. J. Ashworth.
Looms—181—H. A. Bonneville.
Meat biscuits, &c.—186—J. Carr and C. Lucop.
Metals, &c., cutting and dressing—166—J. M. Napier.
Music, printing of—132—J. Lang.
Nails and tacks—158—R. Heathfield.
Ordnance, breech-loading—7—A. M. Clark.
Paper bags, &c., printing—29—W. W. Morley.
Paper pulp—167—D. A. Fyfe.
Pencil cases—183—B. J. Heywood.
Planing machines, &c.—129—W. E. Gedge.
Railway carriages, &c.—120—T. Wood.
Railway switches, &c.—154—C. D. Abel.
Railway trains, signalling in—196—J. Woodley.
Sewing machines—202—A. V. Newton.
Sheep, folding—89—R. Winder.
Ships, propelling—160—H. C. Löbnitz and A. Buquet.
Ships, propelling—172—J. Millward.
Ships, &c.—200—J. H. Johnson.
Sleeve links, &c.—190—G. Gopill.
Spinning machines—144—J. Tolson and J. Boothroyd.
Steam, employing waste—161—S. and E. Burrows.
Stoves and fire-places—152—T. Nash.
Studs—128—F. and I. Alekan.
Sword blades, &c., shaping, &c.—156—W. E. Newton.
Tablets, &c., preparing—87—S. G. Archibald.
Tallow cups, lubricating—73—W. H. Bailey and J. W. Lowther.
Telegraph wires, laying, &c.—130—L. M. Becker.
Thrashing machines—218—H. Brinsmead.
Truncheons—206—C. W. Brown.
Valves—220—A. B. Brown.
Valves, self-acting—182—A. Bochkoltz.
Washing machines—163—J. Young.
Water-closets—142—J. Eggleton.
Water-heating apparatus—208—C. R. Havell.
Water pipes, protecting from injury by frost—175—B. T. Moore.
Windows—145—J. Wood.
Wood-veneer, treating—169—W. R. Lake.
Wool, machinery for preparing—159—J. Moorhouse.
Worsted, &c., spinning—178—H. Kershaw.
Yarns, washing printed and parti-coloured—165—J. Crossley.
Yarn, &c., clearing and smoothing—141—T. Travis, W. H. Prince, and J. Tomlinson.

PATENTS SEALED.

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| 2236. J. H. Johnson. | 2291. T. J. Baker. |
| 2241. T. Allan. | 2303. A. M. Clark. |
| 2242. J. G. Tongue. | 2325. H. M. Mellor. |
| 2244. J. and T. Elce. | 2369. J. W. Dixon, jun., and W. Buttery. |
| 2245. C. D. Abel. | 2508. G. A. Buchholz. |
| 2248. J. Russell. | 2542. R. W. Ewer. |
| 2219. A. Budenberg. | 2552. J. Marsden. |
| 2254. W. W. Hughes. | 2842. R. Smith, jun. |
| 2255. W. Wilson. | 2860. W. H. May and P. Graham. |
| 2264. J. Heaton. | 2871. J. B. P. A. Thierry. |
| 2265. W. Prangley. | 3277. W. Anderson. |
| 2285. A. M. Clark. | |

From Commissioners of Patents Journal, February 4.

PATENTS SEALED.

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| 2259. W. J. Pughley. | 2304. G. Warsop. |
| 2260. A. C. Bamlett. | 2307. F. H. Holmes. |
| 2262. J. G. Tongue. | 2329. J. Badger. |
| 2267. T. Whittaker & M. Rourke. | 2336. C. Holliday. |
| 2270. T. Luthringer. | 2339. W. Betts. |
| 2271. E. J. W. Parnacott. | 2340. W. Betts. |
| 2276. C. McDermott. | 2360. J. W. Dudley. |
| 2278. F. C. Marshall and H. Stewart. | 2459. H. J. Simlick. |
| 2280. M. Hamer. | 2579. W. E. Newton. |
| 2281. T. S. Cressey and J. Webb. | 2972. W. Gray. |
| 2286. C. Benson and J. Barker. | 3031. W. E. De Bourran. |
| 2297. C. Hohgreffe. | 3093. J. Orr. |
| 2299. H. B. Barlow. | 3119. W. Boulton. |
| 2302. G. Hodgson. | 3410. J. Fitter. |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

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| 210. T. Steel. | 310. J. A. Phillips. |
| 244. J. H. Johnson. | 322. J. Booth. |
| 249. V. Burq. | 332. C. Beard. |
| 261. W. Teall and A. Naylor. | 281. J. McNaught and Wm. McNaught, jun. |
| 264. J. Ball. | 319. R. M. Alloway. |
| 286. J. Hughes. | |
| 292. C. Lungley. | |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

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| 230. W. Winstanley, J. Kelly, W. Payne, & J. Formby. | 249. H. Phillips and J. Bannehr. |
| 263. J. Chatterton. | 275. H. Bessemer. |
| 246. E. Smith. | 430. J. J. Miller, jun. |